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10/023,928	12/18/2001	Hirofumi Araki	FUJH 19.274	4760

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EXAMINER

TORRES, JOSEPH D

ART UNIT PAPER NUMBER

2133

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/023,928

**Applicant(s)**

ARAKI, HIROFUMI

**Examiner**

Joseph D. Torres

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 4,9,11 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-8,10 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/18/2001</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I (claims 1-3, 5-8, 10 and 12) in the reply filed on 05/25/2004 is acknowledged.

Claims 4, 9, 11 and 13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 05/25/2004.

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 'S48', 'S49', '43' and 'S61'. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective

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action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: '42' in line 20 on page 34. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3, 5-8, 10 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 1 recites the limitation "the frame" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "said prescribed position" in line 15. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "said prescribed position" in lines 22-23. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "said first synchronization unit" in lines 24-25. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the prescribed position" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the received frame" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "is/are" in line 14. The term "is/are" is indefinite.

Claim 6 recites the limitation "the frame" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "said first synchronization unit" in line 24. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the frame" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "said prescribed position" in line 15. There is insufficient antecedent basis for this limitation in the claim.

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Claim 10 recites the limitation "said prescribed position" in line 21. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the frame" in line 6. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 7, 8, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Luthi; Daniel A. et al. (US 5710783 A, hereafter referred to as Luthi).

35 U.S.C. 102(b) rejection of claims 1, 7, 10 and 12.

Luthi teaches a first frame synchronization unit for attempting to detect said first synchronization data within said received data in a frame hunting state in which frame synchronization is not established (Reed-Solomon/Deinterleaver Synchronization unit 806 in Figure 9 of Luthi is a first frame synchronization unit for attempting to detect a first synchronization word within said data received from Viterbi Decoder 804 in a frame hunting state in which frame synchronization is not established; see col. 4, lines 13-27 in Luthi for details), and entering a synchronous state in which frame synchronization is established when said first synchronization data is detected in said prescribed position

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for a first predetermined number of consecutive frames (col. 4, lines 13-27 in Luthi teach that any phase uncertainty of the signals to the Viterbi decoder are resolved by the Reed-Solomon/Deinterleaver Synchronization unit 806 in Figure 9); an error correction unit for correcting errors of data in the frame based on said check data in the frame when said first synchronization data is detected by said first frame synchronization unit (Reed-Solomon Decoder 810 in Figure 9 of Luthi teaches an error correction unit for correcting errors of data in the frame based on said check data in the frame when said first synchronization data is detected by said first frame synchronization unit; see col. 8, lines 1-9 in Luthi for details); and a second frame synchronization unit for attempting to detect said second synchronization data at said prescribed position within the frame corrected by said error correction unit (Descrambler Synchronization unit 812 in Figure 9 of Luthi is a second frame synchronization unit for attempting to detect said second inverted synchronization bytes at said prescribed position within the frame corrected by said error correction unit; see col. 4, lines 60-67 in Luthi for details), and returning said first synchronization unit to said frame hunting state when said second synchronization data is not detected (col. 5, lines 30-35 in Luthi teach that the Reed-Solomon/Deinterleaver Synchronization unit 806 in Figure 9 is **only** disabled when Descrambler Synchronization unit 812 determines that data is in-sync; hence said first Reed-Solomon/Deinterleaver Synchronization unit 806 remains in said frame hunting state when said second synchronization data is not detected; Note: Descrambler Synchronization unit 812 in Figure 9 of Luthi is never disabled and continuously monitors synchronization).

35 U.S.C. 102(b) rejection of claim 2.

Col. 10, lines 29-32 in Luthi teach that synchronization is determined in the Descrambler Synchronization unit 812 in Figure 9 when inverted sync bytes are received every eight words; hence a minimum number of at least two consecutive detections is required before an in-sync condition can be determined, hence two is a predetermined number.

35 U.S.C. 102(b) rejection of claim 3.

The first Reed-Solomon/Deinterleaver Synchronization unit 806 in Figure 9 of Luthi and second frame Descrambler Synchronization unit 812 are inherently capable of carrying out synchronization attempts for a prescribed number of times. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) and *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971).

35 U.S.C. 102(b) rejection of claim 8.

Col. 10, lines 29-32 in Luthi teach that synchronization is determined in the Descrambler Synchronization unit 812 in Figure 9 when inverted sync bytes are received every eight words; hence a minimum number of at least two consecutive detections is required  
The first Reed-Solomon/Deinterleaver Synchronization unit 806 in Figure 9 of Luthi and second frame Descrambler Synchronization unit 812 are inherently capable of carrying out synchronization attempts for a prescribed number of times. See, e.g., *In re*



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Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) and In re Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luthi; Daniel A. et al. (US 5710783 A, hereafter referred to as Luthi) in view of Perry; Mark J. et al. (US 6731640 B1, hereafter referred to as Perry).

35 U.S.C. 103(a) rejection of claims 5 and 6.

Luthi substantially teaches the claimed invention described in claims 1-3 (as rejected above).

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However Luthi does not explicitly teach the specific use of synchronization codes stored in overhead.

Perry, in an analogous art, teaches use of synchronization codes stored in overhead (col. 4, lines 17-22, Perry).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Luthi with the teachings of Perry by including use of synchronization codes stored in overhead. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of synchronization codes stored in overhead would have provided the opportunity for variable amounts of framing protection (col. 4, lines 17-22, Perry).

### ***Conclusion***

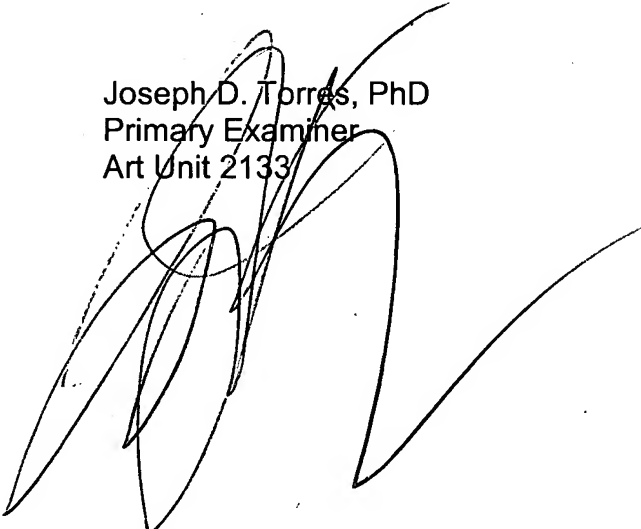
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph D. Torres, PhD  
Primary Examiner  
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A large, stylized handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right, positioned over the typed name and title.